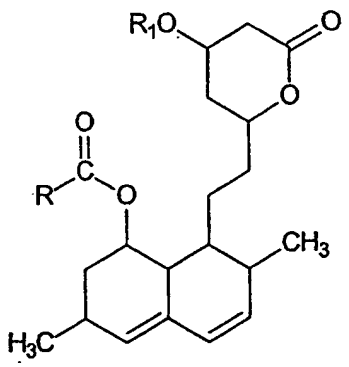
Claims

1. A process for the preparation of 4-oxytetrahydropyran-2-ones of the formula I



(I)

wherein

R means a C_{1-12}-alkyl group and

R_1 means H,

characterized in that in a compound of the formula (I), wherein R has the above meaning and R_1 means a silyl protection group, the silyl protection group is removed by triethylamine trihydrofluoride in an organic solvent, a mixture of organic solvents or without an organic solvent, and the obtained compound is isolated.

2. A process according to claim 1, characterized in that the group R in the formula (I) means a branched or straight C_{1-12}-alkyl group or a cyclic C_{3-10}-alkyl group, preferably C_5-alkyl group, especially $CH_3CH_2C(CH_3)_2$-.

3. A process according to claim 1, characterized in that the silyl protection group R_1 in the formula (I) means a trisubstituted silyl protection group.

4. A process according to claim 3, characterized in that the trisubstituted silyl protection group means trimethylsilyl, triethylsilyl, dimethylisopropylsilyl, *tert*-butyldimethylsilyl, (triphenylmethyl)dimethylsilyl, *tert*-butyldiphenylsilyl,

diisopropylmethylsilyl, triisopropylsilyl, triphenylsilyl, diphenylmethylsilyl, diethylisopropylsilyl, dimethylhexylsilyl, tribenzylsilyl, tri-*p*-xylylsilyl, *tert*-butylmethoxyphenylsilyl, preferably *tert*-butyldimethylsilyl, and trimethylsilyl groups.

5. A process according to claim 1, characterized in that it is performed without a catalyst.

6. A process according to claim 1, characterized in that as the organic solvent or the mixture of organic solvents there are used halogenated organic solvents, hydrocarbons, aromatic hydrocarbons, esters, ethers, amides, amines, nitriles, carbonates, sulfoxides, e.g. 1,4-dioxane, butyl acetate, isopropyl acetate, ethyl acetate, methylene chloride, acetonitrile, dimethylsulfoxide, dimethylformamide, dimethylacetamide, toluene, xylene, tetrahydrofurane, dimethylcarbonate, diethylcarbonate, cycloxehane, and triethylamine.

7. A process according to claim 1, characterized in that the isolation of the obtained compound is performed in the same organic solvent.

8. A process according to claim 7, characterized in that as the organic solvent there are used acetates such as ethyl acetate, propyl acetate, isopropyl acetate, butyl acetate, aromatic hydrocarbons such as toluene, xylene, halogenated hydrocarbons such as dichloromethane, trichloromethane, ethers such as *tert*-butyl methyl ether or mixtures of these solvents are used.

9. A process according to claim 1, characterized in that it is performed at a temperature from 0 °C to the boiling point of the organic solvent or the reaction mixture, preferably at a temperature from room temperature to 50 °C.

10. A process according to claim 1, characterized in that there are used from 0.3 mole on of triethylamine trihydrofluoride to 1 mole of the silylated product, preferably from 0.3 to 1.5 mole of triethylamine trihydrofluoride to 1 mole of the silylated product.

11. *Tert*-butyldimethylsilyloxy simvastatin in a solid form.

12. Use of *tert*-butyldimethylsilyloxy simvastatin in a solid form according to claim 11 for the synthesis of simvastatin.